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ABSTRACT

Purpose – This paper applies the logic of bounded rationality to corporate reputation management and explores how constraints posed by bounded rationality impact on firms' implementation of sustainable supply chain management (SSCM).

Design/methodology/approach – This study draws on primary and secondary data from twelve UK-based companies. We conducted 19 semi-structured interviews and analysed our data through an inductive methodology.

Findings – Reputational risk exposure is a central driver in a company's decision to implement SSCM practices. However, managers face bounded rationality, in particular: (i) conflicting priorities; (ii) capabilities and resources; (iii) commitment; and iv) contextual setting, which in turn, means that companies do what they can to safeguard their reputation, but balance the extent to which they implement SSCM and the cost of doing so against the likelihood of exposure.

Practical implications – By engaging in collaborative relationships with their supply chain partners, focal firms who wish to implement SSCM can spread the cost of SSCM across supply chain partners, which helps decrease the extent to which firms face the conflicting priorities of financial targets and SSCM. A long-term commitment to SSCM can also help build capabilities and resources necessary for SSCM implementation.

Originality/value – We make a significant contribution to the literature by conducting a cross-sectional study of the decision-making process involved in sustainable supply chain

management. Our results suggest that managers are facing a number of constraints, which leads to sub-optimal choices regarding the level of SSCM implementation.

Paper category - Research paper

KEYWORDS: Reputational risk; decision making; bounded rationality; sustainable supply chain management; risk exposure; multiple case studies

Reputational Risks and Sustainable Supply Chain Management: Decision Making under Bounded Rationality

1. Introduction

Companies are increasingly expected to act responsibly throughout their supply chains (Walker and Brammer, 2009; Klassen and Vereecke, 2012), and failure to do so can have significant consequences for their reputation and financial performance (Phillips and Caldwell, 2005). Research has emphasised that reputational risk is an important driver in a company's decision to implement socially and environmentally sustainable supply chain management practices (Zhu and Sarkis, 2007; Carter and Roger, 2008; Seuring and Müller, 2008; Walker and Jones, 2012). However, the decision to implement sustainable supply chain management (SSCM) is often a complex one, which requires substantial commitment and investment (Linton et al., 2007; Pagell and Wu, 2009). More specifically, companies may be aware of the risks associated with failure to implement SSCM, such as negative publicity and reputation damage (Walker and Jones, 2012). However, the decision to actively respond to these risks and implement SSCM is often constrained by lack of information (Pagell et al., 2010), limited resources (Seuring et al., 2008), conflicting priorities (Brammer and Walker, 2011) and lack of know-how and capabilities (Closs et al., 2011). This implies that decisions to respond to reputational risk and engage with SSCM are bounded rational.

Bounded rationality is the idea that decisions are not only determined by the external environment, but also by the abilities and conflicting priorities of decision makers (Simon, 2000). As such, the concept of bounded rationality suggests that decisions are “intendedly rational, but only limitedly so” (Simon, 1957, p. xxiv, see also Williamson, 1993), and implies that the constraints, such as lack of resources and know-how, on the part of the decision-makers result in bounded rational decisions, which may be sub-optimal (Amit and

Schoemaker, 1993). Recent research has emphasised the problems associated with bounded rationality and how this can have implications for supply chain collaboration (Cao and Zhang, 2011), relational norms (Lanier et al., 2010), contractual governance (Lumineau and Henderson, 2012) and supply chain decisions (Hult et al., 2010). However, limited empirical research has investigated the factors that bound the decision to implement SSCM, and how firms try to mitigate reputational risk in environments where there are considerable constraints (Jamali, 2008; Weitzner and Darroch, 2010).

In this paper, we draw together the concepts of reputational risk, bounded rationality and socially and environmentally sustainable supply chain management to investigate companies' decision to implement SSCM as a consequence of their risk exposure. Additionally, we examine the extent to which this decision process is bounded by constraints facing supply chain managers. In so doing, we pursue the following two research questions: *i) What role does a company's reputational risk exposure play in its decision to adopt sustainable supply chain management practices?; and ii) How does bounded rationality impact on a company's decision to implement SSCM?* We draw on cross-sectional datasets consisting of semi-structured interviews with supply chain and CSR professionals and company reports.

We make three distinct contributions. First, we offer one of the first empirical examinations of how firms respond to reputational risk exposure, and decide their level of engagement with SSCM. Secondly, limited extant literature has explored the role of bounded rationality in a company's attempt to implement SSCM. By adopting a bounded rationality lens we also respond to calls for research into how this framework can shed light on SSCM practices. For example, Carter and Easton (2011) recently noted that "while we are beginning to develop an understanding of what drives firm behaviour, we have much less of an understanding of the drivers of individual manager's behaviour and their decision making-

processes” (p.57). Thirdly, we further recent literature (e.g. Carter and Easton, 2011; Wu and Pagell, 2011), by explicitly focusing on risk exposure and the decision to adopt SSCM. As such, we emphasise the complexity of implementing SSCM, and argue that firms may use different decision making processes, and decide on different levels of SSCM engagement depending not only on their exposure to risk, but also their willingness and ability to make informed decisions.

The remainder of the paper is structured as follows: the next section provides an overview of the definitions and composition of SSCM, along with a review of the concepts of reputational risk and decision-making processes, including the concept of bounded rationality. Next, we present our conceptual framework and outline our methods. We then discuss our findings and highlight both managerial and theoretical implications, before outlining limitations and conclusions.

2. Literature review

2.1 Conceptualising sustainable supply chain management

Although sustainable supply chain management has been subject to extensive research in recent years, the definition and composition of SSCM has varied greatly. In evaluating the role of bounded rationality in SSCM, we build on Awaysheh and Klassen’s (2010) definition and composition of SSCM. Specifically, we focus on social and environmental supply chain responsibilities that lie within the control of the firm. Further, we focus on focal firms’ (buyers’) engagement with such issues, rather than suppliers’ socially responsible standards and performance. This is in accordance with the recent work of Klassen and Vereecke (2012), who emphasise the importance of examining focal firms’ activities and their processes. SSCM, however, is a broad concept and multiple definitions have been offered over the years. In its broadest sense SSCM constitute issues relating to both social and

environmental responsibility, and therefore “include consideration of the safety and rights of other stakeholders, diversity issues, [...] and environmental aspects” (Carter and Jennings, 2002, p. 40). Carter and Jennings (2004, p. 151) further argue that SSCM is about the “activities that meet the ethical and discretionary responsibilities expected by society”.

The composition of SSCM as reflected in extant research has also varied greatly, with some studies focusing on a specific area, such as fair labour (Park-Poaps and Rees, 2010) and diversity (Worthington, 2009), while others either focus only on social (Awaysheh and Klassen, 2010) or environmental (Walker et al., 2008; Vachon and Klassen, 2008) issues. Although the composition of SSCM can be both too broad and too narrow, Klassen and Vereecke (2012) follow the work of Wood (1991) and argue that researchers should consider three issues when considering SSCM. These include: “who is being targeted, which issues are being addressed, and how they are being addressed” (Klassen and Vereecke, 2012, p. 104). In this study we focus on buyers’ level of engagement with SSCM, where SSCM are activities designed to improve the social and environmental standards of the supply chain. The “issues being addressed” incorporate both social and environmental practices, including issues relating to minority working conditions, labour standards, health and safety and the environment (see also Carter and Jennings, 2004). The “how” is the outcome element within this research, as we explore the level of engagement – which is a function of both the activities and the embeddedness of these activities within the buyer - and the extent to which risk exposure and the constraints within the firm’s environment influence its propensity to engage in SSCM activities and the extent to which these are formalised within the firm and its supply chain

2.2 Managing reputational risk exposure

Existing studies have often emphasised the strategic role which corporate social and environmental responsibility can play in enhancing a firm's strategic position through both enhancing and protecting corporate reputation. For example, London and Hart (2010) acknowledges that the business case for social and environmental responsibility often lies in enhancing corporate image and particularly in reducing reputational risk. This is in line with much of the existing literature on strategic corporate social responsibility (e.g. Porter and Kramer, 2006; McWilliams and Siegel, 2001), which emphasises that the rationale for CSR goes beyond a moral obligation and should be aligned with the strategic objectives of the firm, such as minimising risk. This can be achieved by the systematic engagement with social and environmental improvements in the supply chain, which often encompass developing economies (London and Hart, 2010; Prahalad and Hart, 2002).

Therefore, one of the most salient and strategic issues of SSCM is how it can mitigate exposure to risk (Roberts, 2003; Pedersen, 2009). Indeed, a recent study by Lefevre et al. (2010) emphasised the importance of SSCM in the context of reputational risk and suggested that firms who either fail to implement socially and environmentally responsible practices, or are non-compliant with regulation in these areas, on average, risk a 12% reduction in their market value. This may be due to the company being perceived as 'irresponsible', which has a severe impact on its' reputation (Lefevre et al., 2010). Further, environmental degradation, use of child labour, resource depletion and other socially and environmentally damaging practices represent some of the most pressing and high-impact risks facing supply chain management today (Förstl et al., 2010). Failure to manage such issues and mitigate the socially and environmentally risks along the supply chain can have detrimental effects on a company's reputation (Spekman and Davis, 2004; Phillips and Caldwell, 2005).

Our emphasis in this study is on 'reputational risk' and its relation to SSCM practices. As such, it is a composition of both reputation and risk. Reputation has been defined as the "aggregate perceptual representation of a company's past actions and future prospects compared against some standard" (Walker, 2010, p. 370), whereas risk is the "chance of danger, damage, loss, injury or any other undesired consequences" (Harland et al., 2003, p. 52). As such, 'reputational risk' consists of two forms: One, it refers to the probability that a negative event or practice occurs; and two, it refers to the probability that stakeholders will detect the negative event or practice, and subsequently change their perception and image of the firm. This includes both exogenous and endogenous factors, including industry (Neef, 2004), institutional environment (Zhu and Sarkis), strategic priorities (Hoejmose et al., 2013), size and visibility (Bowen, 2002). Building on existing research, therefore, we define a firm's reputational risk exposure as the cumulative likelihood that events stemming from these exogenous (e.g. industry environment, supplier location and national institutional context) and endogenous (managerial decision making, firm size and other firm specific issues) sources can occur and negatively impact stakeholders' perception of the firm's behaviour and performance (Ritchie and Brindley, 2007).

The higher the cumulative risk of negative events taking place that impacts the firm, the more exposed the firm is to reputational risk. As such, whilst no business is immune to threats to its reputation stemming from negligent practices in their supply chain, some firms have a higher risk exposure than others. A conventional way in which to determine a given company's risk exposure is to assess the social and/or environmental impact of the industry in which it operates. From an environmental perspective, high risk, or 'dirty' industries have traditionally been defined on the basis of levels of abatement, expenditure per unit of output, or by selecting industries based on their actual emission per unit of output (Mani and Wheeler, 1998). Similarly, a number of industries and firms are linked to having a high social

risk exposure. The apparel/textile and food/drinks industries are cases in point (Brammer and Millington, 2008). Prior research has found that whilst managers often identified substantial risks stemming from the potential exposure to social and environmental challenges in the supply chain, they often do not systematically account for them through any formal processes (Cousins et al., 2004; Sodhi and Tang, 2012). This, in turn, may be attributed to bounded rationality, and help understand why companies fail to choose the optimal level of SSCM engagement in order to mitigate risk (Carter and Rogers, 2008).

2.3 Decision making and bounded rationality

Decisions “involve a commitment of large amounts of organisational resources for the fulfilment of organisational goals and purpose through appropriate means” (Chandler, 1962 cited in Shrivastava and Grant, 1985 p. 98). Decision-making plays a significant role in the field of operations and supply chain management (Dekkers, 2011; Saloman and Whitaker, 2010; Moses and Åhlström, 2009; Mahapatra, 2011). Recent work in SSCM has begun to address the decision of implementing socially and environmentally responsible supply chain management, but it still remains an under-explored area (Carter and Easton, 2011). In particular, Carter et al., (2007) and Wu and Pagell (2011) offer valuable insights into the complexity associated with the decision to implement SSCM. This suggests that firms make decisions that are based on bounded rationality.

Bounded rationality occurs when companies lack perfect information, unlimited resources, and are restricted in their information processing capacity. Under these conditions, firms are forced to make decisions based on the available data, resources and information processing capabilities they have (Simon, 1979). This implies that firms may make sub-optimal decisions because they have to adjust to conditions in which they operate, and because supply chain practitioners may be unwilling and/or unable to choose the optimal

decision (Autry and Golicic, 2010). Bounded rationality also results from lack of transparency and opaque processes that result in information asymmetry (Carter and Easton, 2011).

The constraints, which supply chain practitioners face, are multiple (Gupta and Boyd, 2008), but in the context of SSCM, in particular, three types of constraints - conflicting priorities, capabilities and commitment – prevail. Recently, Wu and Pagell (2011) have explored how firms may manage their short- and long-term economic responsibilities in combination with their wider social and environmental responsibilities. Existing studies have shown that SC managers may lack appropriate capabilities to fully understand how to implement SSCM. This may partly be due to a lack of know-how, as firms often lack the knowledge and capabilities to “concretely and systematically” include social and environmental responsibility into their supply chain (Maignan et al., 2002, p. 641). An ex-post decision, however, may involve accruing capabilities, which can be costly, and hence firms may decide to adopt a more reactive approach to SSCM. Finally, literature has highlighted that a lack of organisational commitment can present a significant barrier to implementing SSCM (Walker et al., 2008; Walker and Jones, 2012), which may lead companies to either neglect SSCM or choosing a sub-optimal SSCM strategy.

2.4 Initial conceptual framework

Given the above discussion, our conceptual framework is presented in Figure 1. Drawing on the work of Zhu and Sarkis (2007), Seuring and Müller (2008), Walker et al. (2008) and Klassen and Vereecke (2012), we argue that a company’s decision to implement SSCM practices and manage these are contingent upon its’ reputational risk exposure. The decision, however, to act upon these two factors is moderated by the constraints faced when making these decisions. These include conflicting priorities (Wu and Pagell, 2011), lack of

capabilities and resources (Zhu and Sarkis, 2007; Carter and Rogers, 2008), and lack of commitment from the organisation (Walker and Jones, 2012). Ultimately, these constraints mean that the decision to implement and engage in SSCM is one of bounded rationality.

Please insert 'Figure 1' about here

3. Methods

3.1 Research approach and sampling

To empirically ground theory development, the study adopts an inductive methodology (Glaser and Strauss, 1967). Analytic induction explicitly accommodates existing theories (Manning, 1982) by moving back and forth between theory generation and data collection, commencing with a review of extant studies to develop a set of research questions and a conceptual framework. We pursue the following two research questions: i) What role does a company's reputational risk exposure play in its decision to adopt sustainable supply chain management practices?; and ii) How does bounded rationality impact on a company's decision to implement SSCM? We then collect rich primary and secondary datasets to challenge our conceptual framework in an effort to refine theory (Manning, 1982). These datasets are pivotal to ensure a rich accumulation of data to draw inferences, thus the authors collected data from multiple sources, including in-depth interviews and company reports. Relevant literature is then revisited, research questions and conceptual framework revised, and another dataset collected. Discrepancies between existing theory and the data are reconciled in subsequent iterations (Bansal and Roth, 2000).

We followed theoretical sampling, the recommended approach to analytic induction, in choosing our cases (Denzin, 1989). In contrast to statistical sampling, in theoretical sampling, cases are chosen to emphasise theoretical issues and to challenge existing theory (Eisenhardt, 1989). Our case sampling was informed by the key concepts under investigation

such as sustainable supply chain management practices, risk exposure (for instance, across different industries and company sizes) and decision making with regards to SSCM.

Empirical data were selected from twelve companies across different sectors (see Table 1).

The multiple case study approach allows us to investigate the concepts under investigation from multiple perspectives and to offer diversity of practices and contexts and thus increase the robustness of the theory induced from empirical findings.

Please insert 'Table 1' about here

3.2 Data sources

The selection of key informants was based on their knowledge about reputational risk exposure and SSCM practices. We used semi-structured, in-depth interviews, which facilitated an understanding of how people make sense of their work activities and the decision-making processes of the wider organisation (Barley and Kunda, 2001). Companies were initially contacted through a letter that was directed to the Head of Procurement, except for cases where contact had already been made (due to participation in previous projects), where we contacted them either via email or by phone. In total, we conducted 19 interviews, lasting between one and two hours, which were digitally recorded and subsequently transcribed. We also took detailed notes during the interviews to collate with interview transcripts. Our interviewees can be separated into two separate categories: (i) individuals from multiple levels of the organisational hierarchy such as category managers, heads of departments and managing directors; and (ii) individuals from different functions including supply chain; operations; corporate social responsibility, and marketing. The wide range of interviewees was necessary to capture a variety of perspectives and build rich case insights.

We started each interview by initially posing broader questions about sustainable supply chain management and what the interviewee and the company considered under these

concepts. We then proceeded to ask what the firm had done in relation to reputational risk exposure, SSCM practices and decision-making processes. To build internal validity, we probed inconsistencies further (Eisenhardt, 1989). We also encouraged informants to illustrate their statements with examples from various situations. Additionally, we collected and analysed company data from published sources such as annual and corporate environmental reports, to offer background information for the interviews and to confirm the reliability of the interviewees' responses.

3.3 Data analysis

In order to ensure our data analysis addresses the research questions, we adopted an analytical framework that has been extensively used in recent research dealing with social and environmental responsibility issues and qualitative research (Bansal and Roth, 2000). To derive valid constructs, we coded and summarised our rich empirical data in an iterative fashion (Miles and Huberman, 1994). Codes emerged from the literature review, conceptual framework and interviews, and were subsequently revised during the actual coding process. Empirical findings were compared with the theoretical framework to explore if conceptual and observed patterns matched (Yin, 2003). We used axial coding to focus on individual category at a time in order to consider the relationships between core concepts under investigation (Strauss, 1987). As theory emerged over multiple data collection and analysis iterations, the authors recoded the complete datasets to ensure relevance and consistency across earlier and later data collection, following the approach outlined by Bansal and Roth (2000). The coding process informed the structure of this study's findings and discussion sections.

4. Findings

4.1 Reputational risk exposure and their primary drivers

We find compelling evidence to suggest that a primary drivers of firms' decision to implement socially and environmentally responsible supply chain management practices is their level of risk exposure. Our findings across all investigated cases emphasised reputational risk exposure as "a vital area to be addressed". For instance, the Chief Procurement Officer (CPO) of case F stated that: "*Reputation and the ability to sustain the supply are both equally important to us. For the company, they are both right now risks and also risks for the next 20 years*". Interviewees across the investigated case companies were particularly aware of the long-term risk exposure they faced if they decided not to engage in SSCM practices as underlined by the following quote: "*A long-term risk is actually if you do not do it [SSCM practices]. In the market you will see actually that you are losing the competitive edge by comparing with your peers. [...] And, if you do not implement them [SSCM practices] you will just lose more and more of your consumers. That is the long-term effect*" (case G, Manager).

While all interviewees acknowledged the importance of managing reputational risk exposure, our findings illustrate that companies' perceptions of the degree of risk exposure and its influence on decision making varied drastically. These differences can be attributed to a number of different factors, which also further enforced the extent to which companies engage with SSCM practices. Drivers for reputational risk exposure are manifold and can be distinguished between internal and external sources of risk. While not offering an exhaustive list of risk drivers, interviewees across our investigated cases drew particular attention to the following internal (company size and visibility) and external (customers and the wider stakeholder network, industry structure, legislation) drivers. These drivers were seen as vital in stimulating managers' decision making process and company policies with regards to SSCM practices. For instance, interviewees across industries noted that: "It is important to

understand that not only value standards are evolving and developing around sustainability issues, but investors and stakeholders are requesting disclosure of the sustainability performance. This includes, for examples, issues around how you are making your product, *how this impacts the environment and employee benefits*” (case G, Manager Consumer Goods Division). Similarly to the importance of customers and the wider stakeholder network, interviewees also mentioned that the marketplace, including customers and suppliers, often drive SSCM practices. *“As part of our risk assessment we would look at how the market performs. That means, the wider market environment and current trends that drive certain behaviour. [...] We would make a decision based on reputational risk”* (case F, CPO). Along the same lines, interviewees emphasised the influence of the market and the company’s position within the market when considering reputational risk exposure. “[Case company] is the leader in this market within the UK and Europe in terms of size and volume. *Naturally, people will come after us*” (Senior Sustainability Manager, case E). Other interviewees made similar observations, and reported that their customers and the media were especially focused on market leaders when they assessed SSCM practices. Interviewees emphasised that *“market leaders are especially visible with regards to sustainability”* (Manager, case I). Being at the *“forefront of customers’ and media’s mind”* increases a firm’s risk exposure. Closely linked to the firm’s visibility is the size of a company. A respondent noted that a bigger firm was often more *“prone to be targeted by customers and media”* (Senior Sustainability Manager & Ethical Trading Manager, case E). Respondents also referred to legislations and company policy as drivers for SSCM practices. These drivers are further investigated in the remainder of our findings sections as they can be considered both drivers and decision-making constraints.

A related but distinct construct emerging from legislation was the acknowledgement made by interviewees of the importance of mitigating bribery and corruption in the supply

chain, for most of our investigated companies these were less predominant issues as they had *“some rigorous supplier selection criteria in place”*. Interviewees reported that their companies had mostly *“some very rigorous selection criteria”* in place. Interviewees also reported that companies had *“regular, mostly annual, visits to our first tier suppliers”*. With regards to the UK Bribery Acts, interviewees acknowledged that the *“UK Bribery Act places obligations that cover all group operations worldwide”* and that this needed to be part of the risk assessment (Senior Sustainability Manager, case D). Interviewees across our investigated cases reported that internal measurements and regulations were put in place *“to avoid any clashes with legislation”*.

4.2 Constraints in the decision making process

Our findings across all investigated cases illustrate that the decision making process in implementing SSCM practices is complex and highly depended on four distinct, but inter-dependent, constraints – conflicting priorities, capabilities and resources, commitment and *contextual setting* (Table 2). We will initially discuss the individual effects, before investigating their combined effects on the decision making process.

Conflicting priorities

It was evident that balancing priorities, particularly costs and short-and long-term trade-offs, was one of the main constraints in the decision making process. As such, although SSCM practices were seen as vital, themes of cost considerations were never far away. Interviewees emphasised that substantial investments were needed to realise SSCM practices: *“At the moment, sustainability is something you have to pay extra for, and that is why the stance that I have taken is that we need to do it for our particular area but without a heavy price tag to go with it”* (Case E, manager). Further, the respondent noted that: *“Cost comes first, because*

there is an element of you have got to get it to a certain price to be able to be competitive in the market and make the *level of profit you need to make*. [...] *We are mainly evaluated in our area on sales and profit and that is pretty much the gist of it. We are not judged on sustainability*” (Case E, manager). This quote was supported by a number of interviewees, emphasising that SSCM engagement and reputational risk exposure would always be considered a trade-off to cost. These quotes illustrate that SSCM practices are costly and that companies do “not necessarily consider SSCM *to be a top priority*” as a Manager from case J mentioned. This view was echoed by another interviewee: “*All the verifications and activities around sustainable supply chain management actually come as an additional cost. You maybe have some environmental products and new technology along the way that you can develop, but more or less it is still considered an additional cost to us and our suppliers*” (case G, Manager).

At the same time, interviewees reported that they were driven by both short- and long-term considerations. Interviewees highlight a trade-off between current investments and long-term payoffs in the form of, for example, market shares through customer retention and expansion. “*There is an element of, at some point, policy is going to say everybody has to be there, so I may as well start doing it now and save myself a lot of work in the long run. But there is also the point that says if I get them to here, it is something that is a point of difference from the competition*” (case E, Product Selection and Pricing Manager). This quote illustrates that SSCM practices were influenced by the potential of securing a competitive advantage over rival companies. Interviewees draw attention to the fact that investing company resources to support SSCM practices now will pay off manifold in the future. For example, a Commodity Manager from case C mentioned that: “*There is also the fact that some of our materials are non-recoverable resources. At some point foil and other things will run out and you are left stuck. Whereas if you have been working on sustainability*

for years, you have got experience in how you can manage that. So rather than your prices going through the roof at that point, hopefully you will be able to keep things in place. So it is *an investment for the future*".

When considering cost and short- and long-term trade-offs, some interviewees pointed to "*cultural clashes*" within and across companies that needed "*to be addressed first*" before realising SSCM practices. Interviewees drew out the importance of aligning internal perspectives on SSCM practices "*across departments and across hierarchical levels*." Similarly, respondents reported that "*cultural clashes*" across focal firms and their suppliers about "*how to do it [SSCM], when to do it, whom to involve and so on*" were often "*hindrances that needed to be tackled first*" before realising SSCM practices (Senior Sustainability Manager & Ethical Trading Manager, case E). Respondents referred to "*very different perceptions*" between focal firms and suppliers when considering SSCM practices. Both themes internal and external commitment and engagement are closely linked to internal and external commitment and supplier and SC-wide engagement. Conflicting priorities were seen as potentially leading to a higher risk exposure, but a driver which could "more easily be addressed" through re-aligning internal (i.e. company) and external (i.e. supply chain) objectives to "work together" in realising SSCM practices.

Capabilities and resources

Apart from balancing conflicting priorities, our findings also indicate that lack of capabilities and sometimes resources moderate the decision making process to implement SSCM practices. This driver was seen as a "big stumbling block" in realising SSCM practices and a constraint that could not be overcome very easily as interviewees pointed out that it would be "resource and time-consuming to acquire or learn new capabilities". Interviewees emphasised that companies often do not possess the necessary capabilities to initiate or

execute SSCM practices and that it is vital to build trust within the whole supply network to ensure access to vital information and support for SSCM practices. *“We do not always have all the capabilities and resources in house and need to consult with advisors and work with our whole supplier network”* (case E, Senior Sustainability Manager & Ethical Trading Manager). Linked to the in-house capabilities, the size of a company does have an impact on the decision-making as outlined by interviewees. *“To some extent, size does actually matter and it helps. If we were a small supplier, we would be nowhere near where we are today. [...] I think being the size we are and buying the volumes we do means that we have got to where we are today”* (case E, Senior Purchasing Manager).

The majority of investigated companies ensured that SSCM focus was limited to a number of initiatives to yield beneficial outcomes with the limited resources and capabilities available. For example, a Manager of case I explained that: *“Regarding SSCM, supplier relationships and our strategic objectives, there are four key things that run through the company. We want to reduce our carbon intensity and carbon footprint. We want to be the energy provider of choice and again reputational risk needs to be reduced in the supply chain. We want to be cost conscious. And then we have a more social element, which is being a good neighbour. [...] It is really about finding your priority areas and concentrating your resources and leveraging your existing capabilities”*. In order to circumvent internal capability and resource constraints, investigated companies aimed to include their whole supply network and work in collaboration with suppliers *“to drive sustainable developments”*.

Commitment

Our findings also reflect a fourth C - commitment, in addition to the 3Cs discussed in the initial conceptual framework. Thus, commitment is another constraint in the decision making

process, but was considered by interviewees as being a constraint which could “more easily be tackled through working together and explaining the benefits of SSCM practices and initiatives” (Senior Sustainability Manager, case D). Some interviewees reported that internal communication has an impact on the decision making process as pointed out by a Manager from case E stating that: *“I know we promote sustainability externally, but I do not feel like there is as much of a focus on sustainability as there is for commercial issues internally”*. While this quote describes internal commitment barriers, a Senior Sustainability Manager of case D describes external commitment constraints: *“It is important to involve the whole supplier network and we are talking about companies and people. We are not divorced from all our suppliers, but there is not always a lot of commitment and enthusiasm”*. This quote illustrates that SSCM practices are partly reliant on the commitment of the whole supply network to be successful, as a focal company alone cannot realise SC-wide practices.

Similarly, a common theme that was repeatedly mentioned was that suppliers and the whole supply network needs to be *“educated and trained to understand what SSCM means to the focal company and the whole supply chain”* (Senior Sustainability Manager, case D). A respondent noted that: *“The supplier would get appropriate information and input from us with regards to the requirements we have. [...] It may not be formalised, it may be more one-to-one sessions. [...] They [suppliers] need to know it quickly. So we may be spent ten minutes with them. [...] Time is money”* (case E, Senior Sustainability Manager & Ethical Trading Manager). In order to drive internal and external commitment, respondent reported about the importance of *“aligning internal and external incentives”* for engaging in SC-wide SSCM initiatives and having supplier training and development opportunities in place. First-tier supplier training was seen as *“vital to drive SSCM engagement”* as especially smaller firms did not possess relevant resources and capabilities ex ante.

Contextual setting

In addition, to the three constraints outlined above, we also found specific constraints related to the contextual setting, including: (i) regulation; (ii) industry structure; and (iii) sourcing. First, interviewees have drawn out the importance of compliance with specific regulations, impacting on the decision making process. For example, apart from stakeholder pressures, interviewees also frequently mentioned legislation as external influencers to drive SSCM practices. While these external pressures help to initiate SSCM engagement, interviewees reported that SSCM engagement must be driven from inside the company. *“There is a lot of legislation, but I think the water industry does try to go beyond legislation and look for best practice. We do have a sustainability network within the water industry under the banner of Water UK. That is when people doing my job from other companies all meet up and try and take these things forward”* (case A, Environmental Coordinator). Similarly, a manager mentioned that: *“Legislation, compliance with rules and norms, does very much shape our decision making process”* (case I, Environmental Manager).

The both remaining factors industry structure and reputation of sourcing were often mentioned together as other vital influencers. *“I think it is a mix of drivers ranging from stakeholders to customers and never forget the industry environment”* (case F, CPO). The industry environment a company operates in has an impact on whether SSCM practices are realised. *“We know there are certain industries that have higher risks than others. [...] For example, the electronics industry in the USA has a much better record than the electronics industry in China in terms of supply chain issues from a labour and environmental point of view”* (case H, Sustainability Manager). Constraints relating to the contextual setting were seen by interviewees as *“very big problems”* which could only be “addressed in the long-term” with the help of the “whole supply chain and all your partners”.

Please insert 'Table 2' about here

When considering the combined effects of the 4Cs identified, interviewees draw attention to the importance of “involving the whole supply chain” and considering solutions to mitigate the impact of the 4Cs from a long-term perspective. For instance, the Manager of case G emphasises that: “Sometimes everything needs to be done in a rush, but that is not how it really works. Capabilities need to *be built up*. [...] Maybe even jointly with your SC partners. And it all takes time. [...] I think we need to consider the long-term benefits of SSCM activities, rather than the short-term problems”. Additionally, interviewees across the investigated cases agreed that while an individual constraint might effectively be addressed by a single company, facing a number of the aforementioned constraints can only be “addressed as SC-wide or even industry practices”. In summary, empirical findings show that constraints relating to conflicting priorities and commitment can be resolved through joint working initiatives and a “clearer message” to internal and external stakeholders. Constraints relating to capabilities and resources and a company’s contextual setting are best addressed through “long-term joint working initiatives” as individual companies rarely have “all the resources and capabilities” to realise SC-wide initiatives.

4.3. SSCM engagement

Findings show that firms driving SSCM activities exhibit an understanding of the need for changing supplier relationships to realise SSCM. For instance, the Senior Sustainability Manager of case E states that: “It is about rethinking everything that we do and fundamental to that is a shift in the perception and the thinking of the supply chain. We can do so much [...], but ultimately, it is the suppliers who will do the doing”. SC-wide engagement is vital to realise SSCM activities.

Although interviewees across cases acknowledge the close link between SSCM and reputational risk exposure, our findings illustrate that not all companies consider SSCM a high business priority or even included it in their risk management systems. While all investigated cases set up risk management systems (RMSs), our findings reveal that levels of SSCM engagement and the decision making process is shaped by RMSs and whether SSCM considerations are included (Table 3). “SSCM is important but we are still not judged on it. For us, to hit our targets, there are ten things that we are targeted on and sustainability is *not one of them. It is something that is encouraged but not imposed*” (case C, Commodity Manager). One interviewee mentioned that ISO certifications were important, but that no formal audit process of SSCM practices were in place when it comes to suppliers. “*At the moment, we only ask about some environmental credentials to get on to the supply chain, but it does not actually matter whether you have it or not, you will pass through the environmental gate anyway*” (case H, Regional Director).

While all companies had a risk management system in place to ensure minimal reputational risk exposure, only a few companies (such as case companies A, G and I) considered extending such systems to include key suppliers and sometimes lower tiered companies from their supply chain when engaging in SSCM practices: “I think we need to drive more sustainability down the supply chain. We encourage our suppliers to measure *their carbon footprint and then we can bring that into our own reporting*” (case A, Environmental Coordinator). Similarly, one interviewee mentioned that: “*I think there would be some advantage to use a joint risk management system with your key suppliers. [...] this would help to share information and knowledge across the supply chain*” (Chief Procurement Officer, case F).

Interviewees across the investigated companies mentioned that it is vital to “*align incentives across the supply chain*” to drive SSCM behaviour. While focal firms are

important to initiate SSCM activities, limited resources and capabilities call for a more “*aligned approach*” across the supply chain. Interviewees from larger firms reported that there should be “*rewards in place*” to drive RSCM behaviour. “*Clarifying roles and responsibilities regarding sustainability*” would further help to drive SC-wide initiatives. Some interviewees, especially from smaller firms (such as case companies H, K and L), mentioned that there was “*sometimes some confusion about our roles*” with regards to SSCM. A more concerted effort towards SC-wide SSCM and a clear risk and cost sharing across sustainability initiatives was seen as further driver to realise SSCM, but something that very few companies had attempted to install so far.

The theme of working together through joint initiatives was seen by interviewees as vital to realise SSCM engagement. Interviewees emphasised the importance of realising “*all-encompassing SSCM practices*”. A manager of case B mentioned that: “*Rather than just focussing on a single topic and going back to your supplier to verify it again and again I think from an overall point of view at [case company] we really paid importance of how to qualify our supplier. We do not just qualify them by one single issue, but we look at the overall risk management system for different areas*”. While the minority of companies include the whole supply network, most companies do see the responsibility of engaging lower tiered suppliers with their own suppliers. “*Is it my job to help my buyers’ and suppliers’ supply chain to get better rates or a more sustainable supply chain? No. If they want this information, they need to go and get it for themselves. I am just asking them for additional information to support their application to be a supplier*” (case E, Senior Sustainability Manager & Ethical Trading Manager).

Please insert ‘Table 3’ about here

5. Discussion

In this study we explored firms' decision to respond to reputational risk exposure and engage in SSCM practices. We argued that this decision would be constrained by conflicting priorities, capabilities and resources, commitment and the contextual setting.

5.1 Reputational risk exposure and SSCM engagement

We find compelling evidence to suggest that reputational risk exposure is a significant consideration for companies when deciding to implement SSCM. Extending prior studies, our analysis acknowledges that firms have different reputational risk exposure and that reputational risk can be categorised as either short- or long-term. Specifically, our findings show that, in the short-term, irresponsible supply chain management practices may temporarily change consumer behaviour, while in the long-run it can have significant implications for market shares and customer retention. These findings extend the findings by Cruz and Wakolbinger (2008), arguing that changes in benefits or costs associated with CSR levels do not only impact the focal company, but also extends across the supply chain. For instance, interviewees mentioned that companies were aware of the negative impact of irresponsible SCM practices in the short term as it “*would lead to reduced profits as customers may consider shopping elsewhere*”, but the long-term effect could be much more “*destructive*”, leading to potential sustained business losses and “*changing consumer preferences*”. The temporal perspective is also reflected in our empirical findings when considering how to mitigate the 4Cs.

Further, constraints relating to conflicting priorities and lack of capabilities/resources were considered to be the most significant - and constantly present constraints. Both remaining constraints could “*more easily be tackled*”, often by adopting a “long-term focus [and] by involving SC partners”. As such, we would anticipate that the negative effect on SSCM engagement is much higher when the purchasing function is faced with many

conflicting priorities and lack financial, time, and know-how resource. The engagement with SSCM is further contingent upon specific firm and industry characteristics. For example, market-leaders, and firms operating in socially and environmentally sensitive industries, are particularly exposed to reputational risk. Respondents from these types of firms indicated that they were highly aware of reputational risk issues and the implication it could have on the company's financial performance. This finding confirms the study by Godfrey (2005), arguing that highly visible, iconic or market-leading firms may be expected to comply with higher standards of responsible behaviour, compared with smaller, lower profile companies. In these cases, SSCM was a clear part of the supply chain agenda, and it was much more integrated in risk management systems and processes compared to companies who were less visible, such as smaller companies, companies operating in the B2B market, and firms operating in markets where there were no obvious socially and environmentally sensitive products being procured.

5.2 Decision making

The decision to implement socially and environmentally responsible supply chain management is influenced by four distinct, but inter-related, constraints. These include: conflicting priorities, capabilities and resources, commitment and contextual setting - we label these as the 4Cs. First, companies and managers face conflicting priorities. Chief among these is the balancing of economic, social and environmental principles. Often, economic responsibilities are prioritised because they are easily measurable, part of short-term targets, and because supply chain departments are often viewed as a central function in the business to manage and reduce expenditures.

Second, companies often lack capabilities and resources to implement SSCM practices. Respondents realised that there were no 'quick fixes' and that in order to

successfully implement SSCM, it required significant outlays and a long-term orientation. Respondents drew out the importance of aligning incentives across the supply chain to drive SSCM initiatives. When considering cost and short- and long-term trade-offs, respondents mentioned “*cultural clashes*” within and across companies. Our empirical findings illustrate the importance of aligning incentives across firm boundaries. Hence, alignment of incentives and SSCM initiative was seen vital to realise a SC-wide impact (Lee, 2004). Third, a lack of commitment from the organisation was also a key constraint on the decision to implement SSCM. Although respondents noted the importance of SSCM and expressed an interest in initiating and implementing SSCM practices, they also highlighted this was not always possible due to a lack of commitment from top management and suppliers. This is in line with existing studies, which have highlighted the importance of supportive organisational values and top management support for SSCM (Salam, 2009; Zhu et al., 2007).

Fourth, we observed that the contextual setting influenced decisions to implement SSCM. For example, in highly regulated environments, respondents were actively engaging in SSCM, but there was little evidence to suggest that this was driven by reputational risk exposure, but more by the need to comply with existing regulations. Figure 2 draws out our revised conceptual framework, reflecting on our rich empirical findings in light of extant literature sources. The revised conceptual framework illustrates a number of primary drivers which impact on a company’s reputational risk exposure during the decision making process. Our study brings forward four empirically validated constraints and outlines a number of countermeasures ranging from risk management systems to supply chain wide initiatives to share resources and combine capabilities across the supply chain.

Please insert ‘Figure 2’ about here

5.3 Moving from ‘ideal’ to ‘constrained’ scenarios

Figure 3 illustrates three theoretical implications of our findings. The horizontal and vertical axes depict the level of ‘reputational risk exposure’ and level of engagement with SSCM, respectively. First, all companies in our sample have some standard SSCM processes in place – such as codes of conduct or third-party certification. These activities were undertaken in order to satisfy regulatory and social norms, and is illustrated by the ‘legitimacy’ line, which illustrates the minimum firms must do to ‘fit-in’ with their broader environmental context. Second, the figure illustrates what we call the ‘ideal scenario’. This curve illustrates the positive relationship between risk exposure and level of engagement with SSCM. More specifically, when there is a greater likelihood of a negative event to occur, and for stakeholders to subsequently discover this, we would expect firms to engage more actively in SSCM. This relationship, however, is anticipated to be diminishing because there is a limit to investment into SSCM and to how much the firm can protect its reputation, given that they do not have full control of all supply chain operations. Third, based on our empirical findings, where we found that constraints (4Cs) reduce the level of SSCM, we propose a ‘constrained scenario’ line. This line is shallower because the identified 4Cs make it difficult to justify engagement with SSCM, and thereby increases the real cost of implementing SSCM practices. As a result, we have a scenario where firms fail to fully manage risks. However, we acknowledge that this may be a calculated decision because the probability of exposure is relatively low, compared to the need for managing more immediate issues.

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5.3 Managerial implications

This study has significant managerial implications. First, managers are often acting under bounded rationality in terms of their SSCM activities. This is an important issue to recognise as it may lead to decisions on the level of SSCM engagement which are suboptimal. This

acknowledgement can serve as a useful facilitator for a more rigorous assessment regarding the risk associated with a lack of appropriate SSCM practices. Therefore, managers who are aware that they are constrained by the 4Cs – conflicting priorities, capabilities and resources, commitment and contextual setting - can implement countermeasures, such as monitoring and auditing of the supply chain, in order to mitigate the reputational implications of acting under bounded rationality. Second, our results suggest that firms can mitigate such implications, by pushing the limits of their bounded rationality. For instance, firms can reduce the costs associated with SSCM by collaborating with both immediate suppliers and the wider supplier network. This can also widen the buying firm's knowledge and improve its skills in implementing sound SSCM practices. Further, firms can develop suppliers and ensure a uniformed approach to SSCM, which can lead to buyers' reducing their reputational risk through better access to information from the supplier, stable long term relationships and improved access to suppliers' product offerings (Wu and Pagell, 2011).

5.4 Limitations and further research avenues

This study contributes significantly to our understanding of the issues that drive decision-making when realising SSCM practices. However, we acknowledge the study's limitations, some of which will serve as the stimulus for future work. First, our sample consists of UK-based firms and a limited number of sectors. Further research should investigate our framework in different countries and across further industries. While our sample consists of private firms, with the increasing importance of public procurement and public-private supply relationships, future research should expand our findings to include public sector organisations. Additionally, further research should explore whether there are any significant differences between SSCM initiatives and decision-making in relation to firm size, sector or product/service offered. Second, further research should consider the link between SSCM

practices and company's competitive advantage. More specifically, future work should seek to explore questions such as; how can SSCM become a competitive advantage for some, but a financial drain and a 'tick box' exercise for others? Third, while we partially acknowledge a SC perspective, this study focuses mainly on decision making from a company perspective. Future research should explore both the supply and the buy side of a relationship, and research could usefully extend the analysis of decision-making practices to encompass the whole supply network. In addition, we investigated companies with an existing supplier base. This, in turn, may pose problems of legacy suppliers, where it is difficult to implement new requirements and processes due to inertia and 'old' routines. Therefore, further research should investigate the use of supplier selection as a way to reduce reputational risk.

6. Conclusions and implications

The study offers one of the first empirical examinations of how companies' respond to reputational risk exposure and decide on their level of engagement with SSCM. Our empirical analysis supports our conceptualisation and identifies that reputational risk exposure is a major driver of the decision to implement SSCM practices. We argue that decision-makers may make sub-optimal choices with respect to their engagement with socially and environmentally responsible supply chain management practices, because their decisions are made under bounded rationality facing several constraints. These include conflicting priorities; capabilities and resources; commitment and contextual setting (4Cs). As such, our study is one of the first empirical assessments of how decisions of SSCM implementations are made, and we offer a theoretical framework, which emphasises both academic and managerial implications of sub-optimal engagement with sustainable supply chain management.

References

- Amit, R. and Schoemaker, P. J. (1993), "Strategic assets and organisational rent", *Strategic Management Journal*, Vol. 14 No. 1, pp. 33-46.
- Autry, C. W. and Golicic, S. L. (2010), "Evaluating buyer-supplier relationship-performance spirals: a longitudinal study", *Journal of Operations Management*, Vol. 28 No. 2, pp. 87-100.
- Awaysheh, A. and Klassen, R. D. (2010), "The impact of supply chain structure on the use of supplier socially responsible practices", *International Journal of Operations & Production Management*, Vol. 30 No. 12, pp. 1246-1268
- Bansal, P. and Roth, K. (2000), "Why companies go green: a model of ecological responsiveness", *Academy of Management Journal*, Vol. 43 No. 4, pp. 717-737.
- Barley, S. R., and Kunda, G. (2001), "Bringing work back in", *Organization Science*, Vol. 12 No. 1, pp. 76-95.
- Bowen, F. (2002), "Does size matter? Organizational slack and visibility as alternative explanations for environmental", *Business & Society*, Vol. 41 No. 1, pp. 118-124.
- Brammer, S. and Walker, H. (2011), "Sustainable procurement in the public sector: an international comparative study", *International Journal of Operations & Production Management*, Vol. 31 No. 4, pp. 452-476.
- Cao, M. and Zhang, Q. (2011), "Supply chain collaboration: impact on collaborative advantage and firm performance", *Journal of Operations Management*, Vol. 29 No. 3, pp. 163-180.
- Carter, C. R. and Easton, P.L. (2011), "Sustainable supply chain management: evolution and future directions", *International Journal of Physical Distribution & Logistics Management*, Vol. 41 No. 1, pp. 46-62.

- Carter, C. R. and Jennings, M. M. (2002), "Social responsibility and supply chain relationships", *Transportation Research Part E: Logistics and Transportation Review*, Vol. 38 No. 1, pp. 37-52.
- Carter, C. R. and Jennings, M. (2004), "The role of purchasing in corporate social responsibility: a structural equation analysis", *Journal of Business Logistics*, Vol. 25 No. 1, pp. 145-186.
- Carter, C.R. and Rogers, D.S. (2008), "A framework of sustainable supply chain management: moving toward new theory", *International Journal of Physical Distribution & Logistics Management*, Vol. 38 No. 5, pp. 360-87.
- Carter, C.R.; Kaufmann, L. and Michel, A. (2007), "Behavioral supply management: a taxonomy of judgment and decision-making biases", *International Journal of Physical Distribution & Logistics Management*, Vol. 37 No. 80, pp. 631-669.
- Closs, D. J.; Speier, C. and Meacham, N. (2011), "Sustainability to support end-to-end value chains: the role of supply chain management", *Journal of the Academy of Marketing Science*, Vol. 39 No. 1, pp. 101-116.
- Cousins, P. D.; Lamming R. C. and Bowen, F. E. (2004), "The role of risk in environment-related supplier initiatives", *International Journal of Operations & Production Management*, Vol. 24 No. 6, pp. 554-565.
- Cruz, J. M. and Wakolbinger, T. (2008), "Multiperiod effects of corporate social responsibility on supply chain networks, transaction costs, emissions, and risk", *International Journal of Production Economics*, Vol. 116 No. 1, pp. 61-74.
- Das, K. (2011), "Integrating effective flexibility measured into a strategic supply chain planning model", *European Journal of Operational Research*, Vol. 211 No. 1, pp. 170-183.

- Dekkers, R. (2011), "Impact of strategic decision making for outsourcing on managing Manufacturing", *International Journal of Operations & Production Management*, Vol. 31 No. 9, pp. 935-965.
- Denzin, N. (1989), *"Interpretive interactionism"*, Newbury Park, CA: Sage.
- Dey, A., LaGuardia, P. and Srinivasan, M. (2011), "Building sustainability in logistics operations: A research agenda", *Management Research Review*, Vol. 34 No 11, pp. 1237-1259.
- Eisenhardt, K.M. (1989), "Building theories from case study research", *Academy of Management Review*, Vol. 14 No. 4, pp. 532-550.
- Förstl, K.; Reuter, C.; Hartmann, E. and Blome, C. (2010), "Managing supplier sustainability risks in a dynamically changing environment--Sustainable supplier management in the chemical industry", *Journal of Purchasing and Supply Management*, Vol. 16 No. 2, pp. 118-130.
- Glaser, B. G. and Strauss, A. L. (1967), "The Discovery of Grounded Theory: Strategies for *Qualitative Research*", New Brunswick: Aldine Transaction.
- Godfrey, P. C. (2005), "The relationship between corporate philanthropy and shareholder wealth: A risk management perspective", *Academy of Management Review*, Vol. 30 No 4, pp. 777-798.
- Gupta, M. and Boyd, L. (2008), "Theory of constraints: a theory in operations management", *International Journal of Operations and Production Management*, Vol. 28 No. 10, pp. 991-1012.
- Harland, C., Brenchley, R., and Walker, H. (2003). "Risk in supply networks". *Journal of Purchasing and Supply Management*, Vol. 9 No. 2, pp. 51-62.
- Hoejmose, S., Brammer, S., and Millington, A. (2013). "An empirical examination of the relationship between business strategy and socially responsible supply chain

- management". *International Journal of Operations and Production Management*, Vol. 33 No. 5, pp. 589-621.
- London, T. and Hart, S. (2010), "Next Generation Business Strategies for the Base of the Pyramid: New Approaches for Building Mutual Value". Financial Times/Prentice Hall.
- Hult, G.T.M.; Craighead, C. and Ketchen, D. J. (2010), "Risk uncertainty and supply chain decisions: a real options perspective", *Decision Sciences Journal*, Vol. 41 No. 3, pp. 435-458.
- Jamali, D. (2008), "A Stakeholder Approach to Corporate Social Responsibility: A Fresh Perspective into Theory and Practice", *Journal of Business Ethics*, Vol. 82 No. 1, pp. 213-231.
- Klassen, R. D. and Vereecke, A. (2012), "Social issues in supply chains: Capabilities link responsibility, risk (opportunity), and performance", *International Journal of Production Economics*, Vol. 140 No.1, pp. 103-115.
- Krueger, D.A. (2008), "The Ethics of Global Supply Chains in China – Convergences of East and West", *Journal of Business Ethics*, Vol. 79 Nos. 1-2, pp. 113-120.
- Lanier Jr., D.; Wempe, W.F. and Zacharia, Z.G. (2010), "Concentrated supply chain membership and financial performance: chain- and firm-level perspectives", *Journal of Operations Management*, Vol. 28 No. 1, pp. 1-16.
- Lee, H.L. (2004). The triple-A supply chain. *Harvard Business Review*, Vol. 82 No.10, pp. 102-112.
- Lefevre, C.; Pellé, D.; Abedi, S.; Martinez, R. and Thaler, P-F. (2010), "Value of sustainable procurement practices", Collaborative report from PwC, EcoVadis and INSEAD.
- Linton, J. D.; Klassen, R. and Jayaraman, V. (2007), "Sustainable supply chains: an introduction", *Journal of Operations Management*, Vol. 25 No. 6, pp. 1075- 1082.

- Lumineau F. and Henderson J. (2012), “The influence of relational experience and contractual governance on the negotiation strategy in buyer-supplier disputes”, *Journal of Operations Management*, Vol. 30 No. 5, pp. 382-395.
- Mahapatra, S. S. (2011), “Supplier selection in Supply Chain Management: a fuzzy multi-criteria decision-making approach”, *International Journal of Services and Operations Management*, Vol. 8 No. 1, pp. 108-126.
- Maignan, I.; Hillebrand, B. and McAlister, D. (2002), “Managing socially-responsible buying: how to integrate non-economic criteria into the purchasing process”, *European Management Journal*, Vol. 20 No. 6, pp. 641-648.
- Mani, M. and Wheeler, D. (1998), “In search of pollution havens? Dirty industry in the world economy, 1960-1995”, *Journal of Environment and Development*, Vol. 7 No. 3, pp. 215-247.
- Manning, P. K. (1982), “Analytic induction”, In P. K. Manning and R. B. Smith (Eds.), “A handbook of social science methods” (pp. 273-302). Cambridge, MA: Ballinger.
- McWilliams, A. and Siegel, D. (2001). “Corporate Social Responsibility: A theory of the firm perspective”, *Academy of management Review*, Vol. 26 Issue 1, pp 117-127.
- Miles, B.M. and Huberman, M. (1994), “Qualitative Data Analysis: An Expanded *Sourcebook*”, 2nd ed. Thousand Oaks: Sage Publications.
- Moses, A. and Åhlström, P. (2009), “Nature of functional involvement in make or buy decision processes”, *International Journal of Operations & Production Management*, Vol. 29 No. 9, pp. 894-920.
- Neef, D. (2004), “Managing corporate risk through better knowledge management”, *The Learning Organization*, Vol. 12 No. 2, pp. 112-124

- Pagell, M. and Wu, Z. (2009), "Building a more complete theory of sustainable supply chain management using case studies of 10 exemplars", *Journal of Supply Chain Management*, Vol. 45 No. 2, pp. 37-56.
- Pagell, M., Zhao, W. and Wasserman, M.E. (2010), "Thinking differently about purchasing portfolios: An assessment of sustainable sourcing", *Journal of Supply Chain Management*, Vol. 46 No. 1, pp. 57-73.
- Park-Poaps, H. and Rees, K. (2010), "Stakeholder forces of socially responsible supply chain management orientation", *Journal of Business Ethics*, Vol. 92 No. 2, pp. 305-322.
- Pedersen, E. R. (2009). "The many and the few: rounding up the SMEs that manage CSR in the supply chain", *Supply Chain Management: An International Journal*. Vol. 14 No. 4, pp. 109-116.
- Phillips, R. and Caldwell, C. B. (2005), "Value chain responsibility: A farewell to arm's length", *Business and Society Review*, Vol. 110 No. 4, pp. 345-370.
- Porter, M. E., and Kramer, M. R. (2006). "The link between competitive advantage and corporate social responsibility", *Harvard Business Review*, Vol. 84 Issue 12, pp. 78-92.
- Prahalad, C. K., and Hart, S. L. (2002). "The Fortune at the Bottom of the Pyramid". *Strategy and Business*, pp. 54-54.
- Ritchie, B., and Brindley, C. (2007). "Supply chain risk management and performance: a guiding framework for future development". *International Journal of Operations & Production Management*, Vol. 27 No. 3, pp. 303-322.
- Roberts, S. (2003), "Supply chain specific? Understanding the patchy success of ethical sourcing initiatives", *Journal of Business Ethics*, Vol. 44 No. 2, pp. 159-170.
- Salam, M.A. (2009). "Corporate Social Responsibility in Purchasing and Supply Chain", *Journal of Business Ethics*, Vol. 85, Supplement 2, pp. 355-370.
- Saloman, V. and Whitaker, R. (2010), "Decision-making considering dependence relations

- for the improvement of production management”, *Brazilian Journal of Operations & Production Management*, Vol. 4 No. 2, pp. 47-53.
- Seuring, S. and Müller, M. (2008), “From a literature review to a conceptual framework for sustainable supply chain management”, *Journal of Cleaner Production*, Vol. 16 No. 15, pp. 1699-1710.
- Seuring, S., Sarkis, J., Müller, M. and Rao, P. (2008), “Sustainability and supply chain management - An introduction to the special issue”, *Journal of Cleaner Production*, Vol. 16 No. 15, pp. 1545-1551.
- Shrivastava, P. and Grant, J. (1985), “Empirically derived models of strategic decision-making processes”, *Strategic Management Journal*, Vol. 6 No. 2, pp. 97-113.
- Simon, H. A. (1957), “Administrative Behavior”, 2nd ed., New York, NY: Macmillan.
- Simon, H. A. (1979), “Rational decision making in business organizations”, *American Economic Review*, Vol. 69 No. 4, pp. 493-513.
- Simon, H.A. (2000). “Bounded rationality in social science: today and tomorrow”, *Mind and Society*, Vol. 1 No. 1, pp. 25-39.
- Sodhi, M.S. and Tang, C.S. (2012), “Strategic approaches for mitigating supply chain risk”, *International Series in Operations Research & Management Science*, Vol. 172 No. 2, pp. 95-108
- Spekman, R.E. and Davis, E.W. (2004), “Risky business: expanding the discussion on risk and the extended enterprise”, *International Journal of Physical Distribution & Logistics Management*, Vol. 34 No. 5, pp. 414-33.
- Strauss, A. L. (1987), “*Qualitative Analysis for Social Scientists*”, Cambridge, UK: Cambridge University Press.
- Vachon, S. and Klassen, R. D. (2008), “Environmental management and manufacturing performance: The role of collaboration in the supply chain”, *International Journal of*

- Production Economics, Vol. 111 No. 2, pp. 299-315.
- Walker, K. (2010). "A systematic review of the corporate reputation literature: Definition, measurement, and theory". *Corporate Reputation Review*, Vol. 12 No. 4, pp. 357-387.
- Walker, H. and Jones, N. (2012), "Sustainable supply chain management across the UK private sector", *Supply Chain Management: An International Journal*, Vol. 17 No. 1, pp. 15-28.
- Walker, H. and Brammer, S. (2009), "Sustainable procurement in the UK public sector", *Supply Chain Management: An International Journal*, Vol. 14 No. 2, pp. 127-38.
- Walker, H.; diSisto, L. and McBain, D. (2008), "Drivers and barriers of environmental supply chain practices: lessons from the public and private sectors", *Journal of Purchasing and Supply Management*, Vol. 14, pp. 69-85.
- Weitzner, D. and Darroch, J. (2010), "The limits of strategic rationality: ethics, enterprise risk management, and governance", *Journal of Business Ethics*, Vol. 92 No. 3, pp. 361-372.
- Williamson, O. E. (1993), "Calculativeness, trust, and economic organization", *Journal of Law and Economics*, Vol. 36, pp. 453-486.
- Wood, D. J. (1991). "Corporate social performance revisited", *Academy of Management Review*, Vol. 16 No. 4, pp. 691-718.
- Worthington, I. (2009), "Corporate perceptions of the business case for supplier diversity: how socially responsible purchasing can 'pay'", *Journal of Business Ethics*, Vol. 90 No. 1, pp. 47-60.
- Wu, Z and Pagell, M. (2011), "Balancing priorities: decision making in sustainable supply chain management", *Journal of Operations Management*, Vol. 29 No. 6, pp. 577-590.
- Yin, R.K. (2003), "Case Study Research: *Design and Methods*", London: SAGE Publications.

- Zhu, Q., and Sarkis, J. (2006), “An inter-sectorial comparison of green supply chain management in China: Drivers and practices”, *Journal of Cleaner Production*, Vol. 14 No. 5, pp. 472-486.
- Zhu, Q., and Sarkis, J. (2007), “The moderating effects of institutional pressures on emergent green supply chain practices and performance”, *International Journal of Production Research*, Vol. 45 Nos. 18-19, pp. 4333-4355.
- Zhu, Q., Sarkis, J., and Lai, K.H. (2007), “Initiatives and outcomes of green supply chain management implementation by Chinese manufacturers”, *Journal of Environmental Management*, Vol. 85 No. 1, pp. 179-189.

Tables and Figures

Case	Industry	# of Employees (circa) ^a	Turnover (in £) (circa) ^a	Profit (in £) (circa) ^a	Risk exposure description ^a
A	Utilities	2,000	500,000	140,000	Although main activities are concerned with natural resources, the firm's level of reputational risk exposure should be regarded as low, given that they operate in a highly regulated industry with strict regulation around environmental management.
B	Food and Drinks	1,500	200,00	2,000	Firm operates in a B2C market and although the majority of their food/drinks products are sourced under the organic principles, they still face significant risks as they source from less-developed countries and operate in a socially sensitive industry.
C	Pharmaceutical	97,500	27,000,000	7,700,000	Firm faces no immediate reputational risk exposure. They mainly produce patented products and their main exposure to reputational risk arises from their (lack of appropriate) corporate governance processes.
D	Utilities	2,000	470,000	160,000	As with cases A and D's main activates, this firm is concerned with natural resources, but they too operate in a highly regulated industry.
E	Retail	31,000	3,800,000	200,000	Firm faces significant reputational risk exposure, as they operate in the B2C sector and have a substantial SC supplying them with a range of light-weight household goods and also source wood products, including timber.
F	Packaging	2,000	220,000	20,000	Firm faces some reputational risk in that they operate in the packaging industry and hence deal with paper and pulp. However, as they operate in a B2B market their risk exposure is buffered by firms operating further down the SC and closer to consumers.
G	Service/ consulting	30,500	1,700,000	200,000	Firm operates in a service/consulting industry and face no immediate risk exposure as they work in a B2B market and do not procure any socially or environmentally sensitive products
H	Construction	200	100,000	3,500	Firm faces some reputational risk exposure as they source environmentally sensitive material (including timber), but they are not a particular visible company in their industry.
I	Utilities	57,500	700,000	-40,000	Similar to cases A and D, this firm operates in a highly regulated market and although they buy and sell natural resources their reputational risk exposure can be considered to be low.
J	Finance	57,500	3,000,000	1,000,000	Firm operates in the finance and insurance market, and faces limited reputational risk.
K	Food and Drinks	5	N/A	N/A	Firm is a micro-firm, and although they operate in the food/drinks market, their lack of visibility means that they are not particularly exposed to reputational risk at a national level, but certainly on a local level.
L	Consulting	30	N/A	N/A	Firm operates in the environmental consulting industry, and face limited reputational risk.

^a Data collected from annual reports and company web sites.

Table 1 Cases overview

Type of bounded rationality	Brief description	Exemplar quotes
Conflicting priorities	Describes the issue of balancing priorities such as costs and short- and long-term trade-offs	<p><i>“The key priority still is cost driven. All the requirements and all the verification and all the activities around sustainability supply chain management actually come as an additional cost”</i> (case G, Manager)</p> <p><i>“I think it is a lot about trade-offs. How much can we invest now and what impact will it have if we do not invest in the future?”</i> (case A, Head of Procurement)</p>
Capabilities and resources	A lack of appropriate capabilities and resources within the focal company or its’ whole supply chain	<p><i>“Capabilities and resources within a firm, but also across your whole supply chain, are important. Without them there would not be any [SSCM] initiatives”</i> (case D, Senior Sustainability Manager)</p> <p><i>“We do not always have all the capabilities in house and need to consult with advisors. This is similar with resources that are needed to realise SC-wide initiatives. We alone as a company do not really possess all the resources”</i> (case E, Senior Sustainability Manager & Ethical Trading Manager)</p>
Commitment	Internal (focal company) or external (encompassing key suppliers or whole supply chain) commitment to realise and execute SSCM practices	<p><i>“Commitment is important and vital. You have to have senior management committed and a strong buy in for all these [SSCM] initiatives”</i> (case K, Senior Manager)</p> <p><i>“But what we have to do and try to do is dragging that supply chain through, and quite often it is like pulling teeth. It takes forever because you have to hand hold, you have to move it in, bit by bit by bit which has its challenges. [...] It is important to involve the whole supply network and we are talking about companies and people. We are not divorced from all our suppliers.”</i> (case E, Senior Sustainability Manager & Ethical Trading Manager).</p>
Contextual setting	Describes the broader ‘institutional environment’ including compliance with laws, rules and regulations	<p><i>“There is a lot of legislation which we are obliged to comply with now, but I think the water industry does try to go beyond legislation and look for best practice”</i> (case A, Environmental Coordinator).</p> <p><i>“I think it is a mix of drivers ranging from stakeholders to customers and you also should never forget the industry environment. I think we are part of an industry that has to be quite sensitive about environmental issues”</i> (case F, CPO).</p>

Table 2 Types of bounded rationality and key quotes

Case	Risk Management System (RMS)	Decision to Implement RMS	Includes SSCM issues	SSCM practices / engagement (examples)	Representative Quotes
A	Yes (but limited risk measuring)	Partially internal, but mainly external drivers (i.e. ensure mitigation of reputational risks)	Yes (but very limited)	Involvement of key suppliers with regards to SSCM; yearly risk analysis	<i>"We do not do any measuring. We do a risk analysis every year of our supply chain"</i> (Head of Procurement)
B 	Yes	Internal and external drivers	Yes	Supplier qualifications; joint workshops and trainings sessions	<i>"We believe we gain a competitive advantage out of the fact that we provide products that have a high standard of sustainability and so risk management is vital"</i> (Manager)
C	Yes (including first tier suppliers)	External drivers	Yes (but limited)	One-off risk audit; no regular check-ups	<i>"Of our first tier companies, all of them have to pass through [the company's] risk audit requirements."</i> (Commodity Manager)
D	Yes (but very limited)	Internal, but mainly external drivers	Yes (but limited)	One-off risk questionnaire; no regular check-ups	<i>"It is about securing supply rather than perhaps being concerned about their [suppliers'] sustainability credentials"</i> (Senior Sustainability Manager)
E	Yes (but very limited)	External drivers	No	Nothing at the moment (in development)	<i>"Our risk management we use is more around whether we feel they will be able to supply us the goods. [...] In terms of a sustainability risk management, there is nothing really in place."</i> (Product Selection and Pricing Manager).
F	Yes	External drivers	Yes (but limited)	ISO certifications; further practices in development	<i>"I think maybe at present it is more considered an additional cost, but sustainability will play a more important role in the future and needs to be addressed as a risk"</i> (CPO)
G	Yes	External drivers	Yes	Supplier involvement; regular workshops with suppliers and other stakeholders	<i>"It is important to think about sustainability as a risk to be managed"</i> (Manager Consumer Goods Division)
H	Yes (but limited; mainly certifications)	External drivers	Yes (but very limited)	Mainly ISO certifications and some infrequent check-ups (further practices in development)	<i>"Because we are market led, we are not by nature champions. We tend to react to what our clients want and client groups act in many different ways, they have lots of different behaviours, depending on what drives them. If their driver is purely commercial, their perception is that sustainability is unaffordable."</i> (Sustainability Manager)
I	Yes (including first tier suppliers)	Internal and external drivers	Yes	Supplier involvement; regular workshops with suppliers and other stakeholders; regular SC-wide questionnaires to check SSCM status	<i>"At the moment, we are finding those suppliers that are happy to work with us and then asking more questions. It is important to have a risk management system in place."</i> (Environmental Manager)
J	Yes (but limited)	External drivers	No	Nothing at the moment	<i>"I guess we could do far more in that area [risks management], but it does cost money and we are commercially oriented"</i> (Manager)

Case	Risk Management System (RMS)	Decision to Implement RMS	Includes SSCM issues	SSCM practices / engagement (examples)	Representative Quotes
K	Yes (but limited)	Internal and external drivers	No	Nothing at the moment	<i>"Your stakeholders do drive how you as a company react to risks"</i> (Senior Manager)
L	Yes (but limited)	External drivers	No	Nothing at the moment	<i>"Yes we do have a risk management system in place, but it is not very systematic or comprehensive at the moment"</i> (Consultant)

Table 3 Risk management systems across case

